

ABSTRACT OF THE DISCLOSURE

5 The present invention relates to a method and apparatus
for automatically monitoring an optical signal-to-noise ratio
in which an arbitrarily polarized optical signal including an
unpolarized ASE noise is inputted to a rotating quarter-wave
plate and then to a rotating linear polarizer so that a
maximum power and a minimum power of the signal outputted from
the rotating linear polarizer can be detected, and the
10 detected maximum power and minimum power is used for
automatically monitoring the optical signal-to-noise ratio.
The method for monitoring the optical signal-to-noise ratio
(OSNR) using a polarization-nulling method, comprises the
steps of: (a) linearly polarizing an arbitrarily polarized
15 optical signal including an unpolarized ASE noise; (b)
separating the optical signal and the ASE noise from the
linearly polarized optical signal including the unpolarized
ASE noise to measure a power of the optical signal and a power
of the ASE noise included in a bandwidth of an optical signal;
20 and (c) obtaining the optical signal-to-noise ratio (OSNR)
using the measured optical signal power and ASE noise power.